MONGOLIA BUSINESS PLUS INITIATIVE

Quality Assurance - Pilot training program

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ABBREVIATIONS AND ACRONYMS

BPI	Business Promotion Initiative (USAID)
CIEH	Chartered Institute of Environmental Health
CPD	Continuing Professional Development
CQI	Chartered Quality Institute
CSH	Charter Stake holder
EBRD	European Bank for Reconstruction & Development
TAM/BAS	Turn around management / Business Advisory Services
EFQM	European Foundation Quality Management
EU	European Union
GASI	General Agency for Specialized Inspection
GDA	Global Development Alliance
HACCP	Hazard Analysis & Critical Control Points
IFC	International Finance Corporation
IRCA	International Register of Certificated Auditors
ISO	International Standards Organization
MBA	Malcolm Baldridge Award
MNCCI	Mongolian National Chamber of Commerce & Industry
MNS	Mongolian National Standards
MONEF	Mongolian National Employers Federation
QMCE	Quality Management Center of Excellence
QMS	Quality Management System
TQM	Total Quality Management
TTT	Train the trainer
TVET	Technical and Vocational Education and Training
USAID	United States Agency for International Development

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EXECUTIVE SUMMARY

Rapid development taking place in the Mongolian private sector is placing substantial strains on the operational capabilities of Mongolian enterprises due to a severe shortage of qualified/experienced managers and trained skilled workers.

Poor Quality Management is a prime reason for inefficient control of business processes, products and services, often linked to poorly trained managers who fail to identify problems that do not meet customer requirements.

The interaction between private sector businesses, government agencies, trade associations, colleges and Universities lacks cohesion and direction – with the public sector determining what private sector training components should be delivered – These problems leave the private sector asking the question as to why the academic and vocational training chain - school to work, VET colleges and universities - does not include any program covering Quality Management.

In the food sector there are currently only two companies certified to ISO 22000 food "risk' management" system, yet food poisoning cases are causing schools, kinder gardens and businesses to be regularly closed due to food contamination.

The Quality Assurance pilot training program is designed to offer trainees foundation training in Quality and Food Safety Management, with progression levels that include internationally accredited training and certification standards for Quality Assurance (ISO) & Food Safety realized under international professional and accredited certification and training institutions.

The BPI QA pilot training program will deliver Quality and Food Safety training in Ulaanbaatar, based on best practices that will provide both trainees and commercial organizations with training to understand and deliver products or services that do meet customer requirements. Training levels are:

Foundation - Food Safety Hygiene - Total Quality Management
Intermediate - HACCP Food safety System - QMS Internal Auditing
Advanced – ISO 9001 Quality / 22000 Food Safety Lead Auditor training

From January 2012 BPI proposed pilot training program will endeavor to train over 200 people in Quality & Food Safety subjects, with examination and certification being governed by international assessment bodies (American Society of Quality, Chartered Institute of Environmental Health). The pilot training costs will be funded by BPI, but consideration is being given to trainee contributions up to 50%.

For Mongolian industry to become more efficient and effective it will be essential for companies to increase training that will raise standards of quality management, to achieve improved quality of products and services. To this end, discussions are already underway with a number of interested private sector parties, trade associations and educational bodies. A draft plan has been developed for the establishment of a private sector governed Quality Management Center of Excellence (QMCE) and is included as an Annex to the BPI QA pilot training program report.

SECTION I: PURPOSE

The purpose of this strategy document is to establish the criteria and methods required for the design and delivery of a pilot Quality Assurance training program for private sector company trainees.

The Mongolia BPI program KRA 2.3.1 calls for the provision of technical assistance for the development and implementation of a Quality Assurance Program. Activities require the introduction of internationally accredited training and certification standards for Quality Assurance (ISO) & Food Safety HACCP.

The proposal will describe the training components and resources required for inclusion in the pilot training program.

Linked along with a suggested framework for a fee collecting Quality Assurance Center that will after establishment, become capable of providing extended training of managers and management system auditors – this would be realized under international professional and accredited certification and training institutions.

SECTION II: BACKGROUND

Mongolia's economic growth is being forecast to accelerate substantially in the next five years – now already exceeding 10% - initially much of this will be due to a marked increase in foreign investment. The rapid development is placing substantial strains on the operational capabilities of Mongolian enterprises due to the severe shortage of qualified / experienced managers, and trained skilled workers.

2.1 Quality

In terms of Quality Management, a prime reason for poor controls of business processes, products and services is unqualified managers, resulting in not identifying and not meeting customer requirements which in turn frequently contributes to low operational efficiency.

The failure of "doing the job right" and "doing the right job" is resulting in huge waste of effort – up to 50% in some manufacturing and service enterprises – this often prevents them competing against international enterprises, or accessing international markets to export their products.

Enterprises are very concerned as to why the academic and vocational training chain - school to work, VET colleges and universities do not currently include any program covering Quality Management; little evidence is found on training courses on Food Safety.

To become competitive it will be essential for manufacturing companies to improve their quality management, products and services by introducing a Quality Management culture.

2.2 Food Safety

The meat sector should have a large export potential, yet exports of meat are well below the levels of the early 1990s. The rehabilitation of the meat sub-sector is having positive impacts on businesses, but the difficulty for many enterprises is that the vocational training framework to gain specific food safety training and knowledge through national training avenues is very limited.

Despite the high domestic production of milk, only around 7 percent of the total is processed by the formal industry. Most of the processed milk consumed in urban areas is imported. Hygienic conditions and quality of traditionally processed raw milk and milk products does not meet the requirements of Codex Alimentarius General Food Hygiene requirements.

Currently there are only two companies in the country with ISO 22000 certification, and the HACCP food "risk' management system is not yet a food business requirement even though food poisoning cases are causing schools and kindergartens to be regularly closed due to microbiological contamination. Interestingly, the IFC is currently implementing a program around Food Safety which is investigating whether HACCP could serve as a new regulatory standard moving forward in Mongolia.

The interaction between private sector businesses, Government agencies, trade associations, colleges and Universities lacks cohesion and direction – with public sector often determining what private sector training components should be delivered – this must be reversed to ensure the training outcomes meet the requirements of commerce and industry.

SECTION III: PROJECT DESCRIPTION

The Quality Assurance pilot training program is designed to offer trainees foundation training in Quality and Food Safety Management, using tools and techniques suited to commercial situations. Best practices will be used as a benchmark for international methods and levels of training and certification, providing both trainees and commercial organizations with opportunities to develop workplace activities necessary to provide products or services that will meet customer requirements.

SECTION IV: PROJECT SCOPE

The provision of Quality and Food Safety pilot training will be in Ulaanbaatar, covering;

- Manufacturing - Mining and service industries
- Food processing - Meat, dairy and other food processors.

SECTION V: QUALITY ASSURANCE PILOT TRAINING PROGRAM

The proposed pilot training program is being structured around 3 levels of training:

1. **Foundation** - Food Safety Hygiene - Total Quality Management
2. **Intermediate** - HACCP Food Safety System - QMS Internal Auditing
3. **Advanced** – ISO 9001 Quality – ISO 22000 Food Safety Lead Auditor training

SECTION VI: COURSE SYLLABUSES AND CERTIFICATION BODY

The courses that will be delivered are under the licensed control of international bodies

- American Society of Quality,
- Chartered Institute of Environmental Health
- International Register of Certificated Auditors.

1. Foundation Food Safety Hygiene – Chartered Institute of Environmental Health

The course sets out to provide students with the understanding and importance of food safety and knowledge of systems, techniques and procedures involved - how to control food safety risks (personal hygiene, food storage, cooking and handling) – how to safely deliver quality food to customers.

2. Certified Quality Inspection Associate – American Society of Quality

The Certified Quality Improvement Associate has a basic knowledge of quality tools and their uses and is involved in quality improvement projects, but does not necessarily come from a traditional quality area.

3. HACCP Food Safety Management system – CIEH

This qualification is designed to ensure candidates develop the required knowledge and practical skills to implement a risk based HACCP food safety plan in their workplace. The course is a mixture of blended learning (classroom / workplace) and candidates are assessed by assignment that requires the development of a HACCP plan.

4. Certified Quality Auditor – ASQ

The Certified Quality Auditor course covers the standards and principles of internal auditing and the auditing techniques of examining, questioning, evaluating, and reporting on a quality system's adequacy, deficiencies, evaluation and control systems.

5. ISO 9000:2008 Quality Lead Auditor – IRCA

The 5 day course introduces how the 9001 business process improvement model which is based on the Plan-Do-Check-Act (PDCA) cycle and 8 quality management principles, ensures continued maximum effectiveness – delegates will learn how a quality management system requires regular performance assessment through process auditing techniques.

6. Food Safety Lead Auditor – IRCA

Delegates will learn why the primary customer requirement of any food product is safety. ISO 22000 provides the food industry with an important model for identifying, managing and improving the food safety risks from food operations.

The IRCA FSMS professional program illustrates the move from inspection-focused practice to the management system approach to risk management, supported by a staged audit process based on ISO 19011 (auditing guidelines).

All of the above courses are certified through external international body marking and certification - The full course syllabuses are described in Annex A.

SECTION VII: TRAINING CRITERIA

In order to develop training benchmarks that will ably equip trainees with quality management skills, the training will be designed to;

a. Be progressive – learning about quality, customers, through to managing quality and meeting customer expectations.
b. Suitable for trainees to use in industry
c. Involving private sector companies to contribute and share in course development.

This incorporates using accelerated learning techniques, blended learning, and training modules that are certified against international standards. This will be achieved by linking and using materials and standards from;

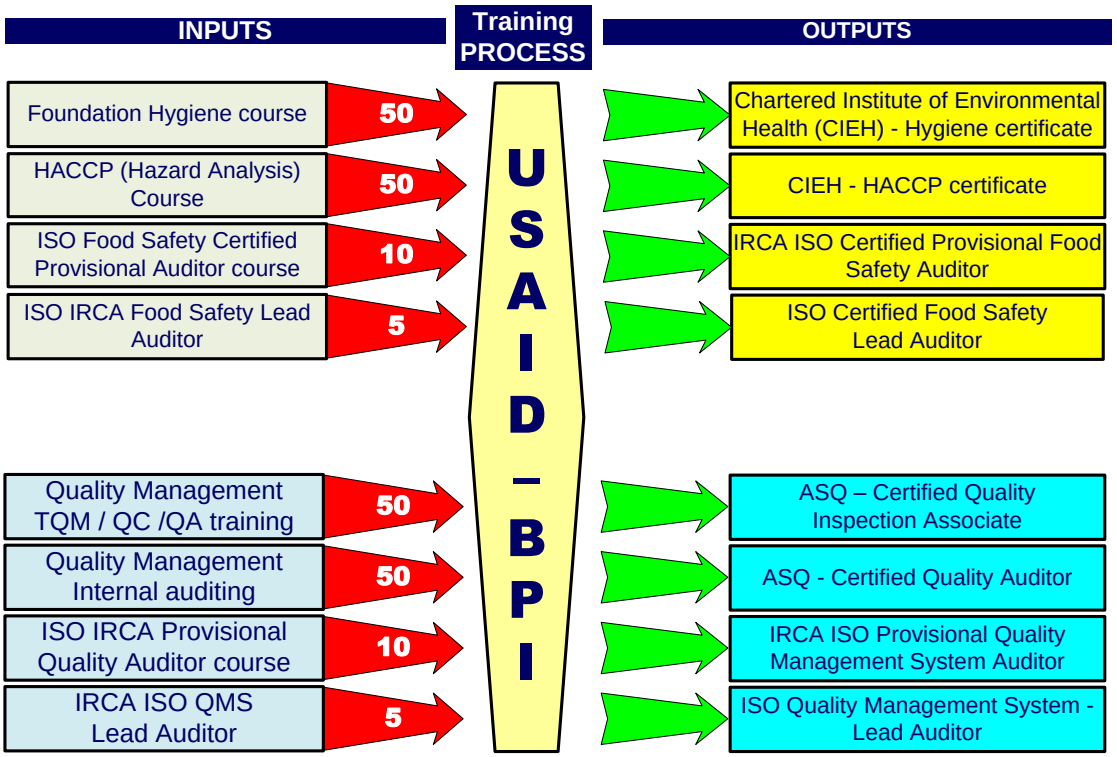
a. International Standards Organization - ISO standards,
b. European Foundation of Quality Management
c. Malcolm Baldridge model
d. American Society of Quality Book of Quality Knowledge
e. Chartered Institute of Quality
f. Chartered Institute of Environmental Health
g. International Register of Certificated Auditors

To meet the above criteria will require;

a. International syllabus content – outlined in Annex A.
b. Successful results – Pass levels applied to international level examinations will place considerable pressure on the more mature trainees, therefore requiring supply / translation of pre course materials, and extended learning.
c. Accurate translation – this will involve considerable work – both in time and cost. International certification bodies will require validated proof for any translation work applied to certified materials.
d. Future Mongolian trainers will have to undertake "Train the Trainer" tuition and certification to meet the increasing standards of international professional bodies.
e. Trainee feedback - questionnaires (hard copy / online) to gain positive / negative course content / materials / tutor feedback – followed by where called for – improvements
f. The utilization of "sandwich" training – a four day course may be split into 2 + 2 days, or 2 + 1 + 1, allowing trainees increased study time for workplace linkage, and external examination preparation, and tutor facilitation and feedback sessions.

SECTION VIII: PILOT TRAINING PLANNED COURSE OUTPUTS

The following diagram illustrates the outline, training components and planned delegate intake numbers during the training pilot.



In addition to the numbers of participating delegates, it is proposed to include in the pilot training select representatives of Trade Associations in order to develop training capacity and extension. Envisioned fees need be set for these representatives.

SECTION IX: TRAINEE ENTRY QUALIFICATION ENTRY REQUIREMENTS

The delegate qualification criteria required for the pilot phase of the QA training programs will be based on the three mentioned levels of training (9.1 a-c);

- Foundation – Secondary education level
- Intermediate – High school / university / work experience
- Advanced – University degree / or certification in levels 1 & 2
- Trainees will be required to complete an entry test pass before intake selection, and trainees for Lead Auditor courses will need to comply with IRCA requirements;

Grade	Education	Work experience	Auditor training	Audit experience	
Auditor	Minimum **secondary**	5 years or 4 years plus degree/**near degree** 2 years - quality related	QMS auditor/ lead auditor course	4 (as trainee auditor)	20 (10 on-site)
Lead auditor	Minimum **secondary**	5 years or 4 years plus **degree/near degree** 2 years - quality related	QMS auditor/ lead auditor course	4 (as trainee auditor) 3 (as trainee lead auditor)	20 (10 on-site) (1 on-site)

SECTION X: PILOT TRAINING COURSES DELIVERY TIMEFRAME

There is a requisite preparation, organization and translation period foreseen for each Pilot course after registration of the training Center. Thus, a stepped approach to introduction and implementation of courses is recommended. This is illustrated in the table below.

Pilot Training Timeframe	2011			2012								
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
TQM				25		25						50
Hygiene			25		25							50
HACCP				25		25						50
QMS - Internal audit					25		25					50
5 Day PLA - Quality						10						10
5 Day PLA - FS							10					10
LA - Quality site audit training									5			5
LA - FS site audit training									5			5
Total												**220**

1. Project rollout – It is planned to officially announce the BPI pilot program on November 7th, 2011 to coincide with World Quality Day
2. Pilot training is planned to commence in December 2011

SECTION XI: PILOT TRAINING FUNDING

BPI will be fully funding the development of curriculum and materials, but some primary costs of training program will be supported by participants. BPI is not allowed to take in revenues in Mongolia, indicating the need for an officially registered training body that can sell training services in Mongolia.

The BPI pilot training is designed to provide the foundation blocks for quality management training in Mongolia – the vision being a Quality Management Center of Excellence that will provide delivery of quality management training through private sector leadership over a period of time.

SECTION XII: QUALITY ASSURANCE PROJECT DEVELOPMENT

The completion and results measurement of the quality management skills pilot training should quickly indicate the continuance grade of further industry led training. It is likely not only to require the establishment of a commercial fee collecting training organization, but also one that can provide training that will meet private sector needs, and international certification levels based on current skills and knowledge level.

In anticipation of this need, efforts are already underway with discussions taking place with a number of enterprises interested in establishing a Quality Management Training Center – the plan will focus on inviting a number of corporate enterprises to become investor charter members, who will be involved in the vision, mission and objectives, as well as the formal registration of a commercial training provider entity.

Additional costs for course extension (other quality areas, Environmental Management, Health & Safety Management, University degree curricula, and college vocational courses in Quality management subjects) may require consideration of a GDA arrangement being facilitated between USAID and public and private sectors.

A summary of a proposed QMCE framework is outlined in Annex C, and a draft budget in Annex D

ANNEXES

ANNEX A: TRAINING COURSE SYLLABUSES

1. Quality Management - Certified Quality Inspection Associate

Total Quality Management
Principles of TQM
Quality Tools
Achieving Total Quality
Quality Improvements
Implementing TQM
Terms, Concepts, and Principles
Quality
Quality planning
The Importance of employees
Systems and Processes
Variation
Benefits of Quality
Quality Philosophies
Teams
Understanding Teams
Purpose
Characteristics and types
Value
Roles and Responsibilities
Team Formation and Group Dynamics
Initiating teams
Team Stages
Team Barriers
Decision Making
Continuous Improvement
Incremental and Breakthrough Improvement
Improvement Cycles
Problem Solving Process
Improvement Tools
Customer-Supplier Relationships
Internal and External customers
Customer Feedback
Internal and External Suppliers
Supplier feedback
Internal Audit

- ISO 19011 Audit guidelines
- Audit cycle

2. Certified Quality Auditor

- AUDITING FUNDAMENTALS
  Basic Terms and Concepts
  Purpose of Audits
  Types of Quality Audits
  Audit Criteria
  Roles and Responsibilities of Audit Participants

Ethical, legal, and professional Issues
Audit Preparation and Planning
Audit Performance
Audit Reporting
Audit Follow-up and Closure

- AUDITOR COMPETENCIES
  Auditor Characteristics
  Resource Management
  Conflict Resolution
  Communication Techniques
  Interviewing Techniques
  Team Membership, Leadership, and Facilitation
  Presentation Techniques
  Verification and Validation
- AUDIT PROGRAM AND BUSINESS APPLICATIONS (15 QUESTIONS)
  Audit Program Management
  Business Applications
- QUALITY TOOLS AND TECHNIQUES (22 QUESTIONS)
  Fundamental Quality Control Tools
  Quality Improvement Tools
  Descriptive Statistics
  Sampling Methods
  Process Capability
  Qualitative and Quantitative Analysis
  Cost of Quality

3. IRCA Provisional 5 day Lead Auditor course - ISO 9001:2008 QUALITY

The course is structured around a series of practical build-up modules which cover:

- ISO 9001:2008 and its application to a wide range of manufacturing and service organizations
- The international guidance for auditing quality management systems – ISO 19011
- Planning an audit including document review, preparation of checklists and audit plans
- Carrying out an audit using case study and role play techniques
- Analyzing and reporting the audit findings, and rating them in order of significance
- Determining the effectiveness of corrective and preventive actions
- Instruction and practical exercises on the ISO 9000 series and ISO 19011 - auditing using accelerated learning.
- Preparation for auditing

<u>Day 1-2</u>

- Case Study Company document review & report to management
- Preparation of audit plan and ISO 9001: 2008 checklists
- Opening Meeting

<u>Day 3</u>

- Audit of a case-study Company. Interactive audit (tutor(s) play auditees) of the business processes.
- Preparation of the audit report
- Closing meeting and presentation of findings

Day 4-5

- Surveillance activities
- Mock examination & feedback
- The route to IRCA registration
- Revision and examination

IRCA Certification criteria

- Coverage of ISO 9001
- Process auditing
- planning the on-site audit:
- Conducting the audit:
- Document review
- The Learning cycle
- Learning styles
- Session plans
- Continuous assessment
- Blended Learning
- Self-Study

4. Food Safety for Manufacturing - CIEH Level 2 Award in Food Safety for Manufacturing – Syllabus Introduction to food safety

Candidates should understand the terminology used in food safety and should be able to:

i. Define the terms food safety, food poisoning, food-borne
ii. State the consequences of poor standards of food
iii. Explain the use of a documented food safety system
iv. Understand the relationship between hazard, risk and
v. Describe the main symptoms of food poisoning.
vi. Give examples of those people most at risk
vii. Understand the definition of high-risk food

The law

Candidates should understand the laws that apply to food manufacturing businesses and should be able to describe, in general terms, the requirements of the current regulations and:

i. Understand the role of enforcement officers
ii. State the possible consequences of non-compliance
iii. Describe the legal requirements of training
iv. Identify where to find further sources of information
v. Describe the importance of accurate record keeping
vi. Explain the concept of ‘due diligence’

Food safety hazards

Candidates should understand the concept of food hazards, how the risk of food poisoning can be contained and be able to:

i. Explain the concept of contamination and give examples
ii. Understand the term cross-contamination
iii. Understand the reasons for the separation of raw and cooked foods
iv. State common causes of physical and chemical food poisoning
v. State common foods or food ingredients that cause poisoning
vi. State the biological and non-biological causes of food poisoning.
vii. State what micro-organisms are and where they are
viii. State the causes of food spoilage, and how to recognize it

ix. Name some common food poisoning bacteria
x. Give examples of common food-borne illnesses
xi. State the factors that influence the multiplication of food poisoning
xii. Explain the process by which bacteria reproduce
xiii. State the high and low temperatures required to kill bacteria
xiv. Explain with an example why bacterial spores pose a danger
xv. Define toxins and state why they are dangerous
xvi. Define the term carrier in relation to food-borne illness.
xvii. Understand the risks to food safety posed by carriers
xviii. Understand to whom and why reporting procedures are

Temperature controls

Candidates should understand how a reduction in temperature will minimize bacterial multiplication, and that high temperature treatments are required to destroy bacteria and should be able to:

i. State the temperatures at which ambient and chilled bacteria exists
ii. Explain that the application of heat treatment
iii. Describe safe methods of chilling and freezing processed food
iv. Explain temperature-monitoring devices
v. Describe methods of checking and recording

Heat processing of foods

Candidates should understand the importance of high temperatures in the supply of safe food and, in particular, be able to:

i. Explain the risks associated with under-cooking foods
ii. Describe methods of monitoring and recording heat
iii. State the main ways in which food is preserved

Food handlers

Candidates should understand that food handlers in food manufacturing plants could themselves pose a risk to food safety and be able to:

i. Understand the importance of personal hygiene at work.
ii. Understand direct handling of food
iii. Detail the need for hand washing at appropriate times
iv. Explain the importance of behaving safely when working
v. Describe the importance and properties of protective handling
vi. Explain how jewelry and other accessories can be a hazard
vii. Understand the importance of reporting cuts and grazes
viii. Explain the reasons for using food grade dressings
ix. State the relevant statutory and non-statutory governing legislation

Principles of safe food storage

Candidates should understand the importance of utilizing appropriate storage conditions for different types of food and should be able to:

i. Understand the significance and importance of labeling
ii. Understand the principles of stock rotation
iii. Understand procedures required for storing and processing
iv. Understand the importance of traceability of raw goods

Cleaning

Candidates should understand the importance of cleaning in food manufacturing plants and should be able to:

i. Understand the importance of safe disposal of food

ii. Understand the role of cleaning
iii. Explain the terms cleaning, disinfection and sanitization
iv. Understand the function of a detergent and disinfectant
v. Briefly explain the function of a cleaning schedule
vi. Explain why 'clean as you go' is an essential rule for all

Food premises and equipment
Candidates should recognize the need for high standards for structure and equipment to promote good hygiene in food manufacturing plants and should be able to:

i. Understand the importance and reasons for reporting
ii. Define the term 'food pest' and describe the conditions
iii. Name the different types of common food pests.
iv. List the signs of a pest infestation

5. HACCP (Hazard Analysis & Critical Control Points)

Candidates should understand the importance of HACCP-based food safety management procedures, appreciate the need for food businesses to take a proactive approach to analyzing potential food hazards and be able to:

- Define the term hazard as it relates to food.
- Describe the nature and variety of food hazards and the implications of failing to control them.
- State the benefits of an organized food hazard identification and control system.
- State the legal requirements for a food safety management procedure based on the Codex principles of HACCP.

Preliminary procedures
Candidates should understand the preliminary processes for HACCP-based procedures and be able to:

- Describe the policies, standards and prerequisites for HACCP.
- Explain the requirements and skills of a HACCP team.
- Describe the product including its intended use, at-risk consumer groups and the scope of potential hazards.
- Produce a suitable process flow diagram.
- Explain the importance of on-site confirmation of the process flow diagram.

The development of HACCP-based procedures
Candidates should understand how to develop a HACCP-based procedure and be able to:

- Detail the techniques involved in planning, analyzing and documenting a HACCP plan.
- Identify relevant food hazards, their significance and location within the process, and justifiable control measures.
- Identify points where control is critical and define and differentiate between control points and critical control points.
- Establish critical limits and tolerances/targets for each critical control point.
- Identify methods of implementing and communicating the HACCP system in the workplace.

Monitoring HACCP procedures
Candidates should understand how critical control points can be monitored and the actions that must be carried out if critical limits are not met and be able to:

- Determine suitable control measures and monitoring procedures.
- Establish essential monitoring procedures at each critical control point.

- Determine the nature of, and limits for any corrective action.

Evaluating HACCP procedures
Candidates should understand the need for accurate documentation and record keeping and be able to:

- Devise suitable and appropriate documentation.
- Establish procedures for verification to confirm that the HACCP system is working effectively.
- Identify the need for review and state the circumstances under which review should be carried out.

6. ISO 22000:2005 Food Safety – 5 day Provisional Lead Auditor course

The Food Safety Provisional Lead Auditor course will replicate the Quality auditor course (Annex A – item 3) but will focus on Food Safety Management Systems.

7. Quality – Auditor status training

To complete Lead Auditor status trainees will be undertake industry audit training in USA, Europe Japan, China, Korea, and Hong Kong, Taiwan.

8. Food Safety – Auditor status training

As item 7 above, but within the Food Industry - USA, Europe Japan, China, Korea, Hong Kong, Taiwan

ANNEX B: BPI - QA PILOT TRAINING - DRAFT BUDGET COSTS

		Foundation quality - TQM	Internal Audit	Lead Audit course	Lead Audits	Foundation Hygiene	HACCP	Lead Audit training	Lead Audits	Number of Delegates	Total
Course development - days		4	3			3	4				
Course delivery days		8	6	5	15	6	8	5	15		
Materials Translation days		16	12			12	16				
Seminar interpreter days		8	6			6	8				
Course development costs		$2,500	$1,875			$1,875	$2,500				$8,750
Course delivery days cost		$5,000	$3,750			$3,750	$5,000				$17,500
International trainer cost	###										
National trainer cost	$45										
QMCE registration cost		$100	$100	$100	$100	$100	$100	$100	$100		$800
Training Center registration cost		$400	$400			$400	$400				$1,600
Training course registration		$500	$500			$400	$400				$1,800
Trainer registration		$80	$80			$80	$80				$320
Training pack		$250	$250			$250	$250				$1,000
Materials Translation	$40	$640	$480			$480	$640				$2,240
Seminar interpreter	$40	$320	$240			$240	$320				$1,120
5 day Quality LA cost				$18,000							$18,000
5 day Food Safety cost								$18,000			$18,000
Training room hire BPI											$0
Course license costs - ISO LA				$5,000				$5,000			$10,000
SUB TOTAL		$9,790	$7,675	$23,100	$100	$7,575	$9,690	$23,100	$100		**$81,130**
NON BPI costs											
Pre - Course material -						$20				50	$1,000

Hygiene											
Pre - Course material - HACCP							$25			50	$1,250
Pre - Course material - TQM		$25								50	$1,250
Pre - Course material – Internal Audit			$20							50	$1,000
Course book – Hygiene						$20				50	$1,000
Course book – HACCP							$25			50	$1,250
Course book - TQM		$25								50	$1,250
Course book - Internal audit			$20							50	$1,000
Examination paper – Hygiene						$15				50	$750
Examination paper – HACCP							$15			50	$750
Examination paper – TQM		$300								50	$15,000
Examination paper - Internal Audit			$300							50	$15,000
5 day Quality LA cost											
5 day Food Safety cost											
Quality LA China – cost					$3,500					5	$17,500
Food Safety LA China – cost									$3,500	5	$17,500
Unit Sub Total		$350	$340	$0	$3,500	$55	$65	$0	$3,500		**$75,500**
DELEGATES		**50**	**50**	**10**	**5**	**50**	**50**	**10**	**5**	**230**	
Total Non BPI cost		**$17,500**	**$17,000**	**$0**	**$17,500**	**$2,750**	**$3,250**	**$0**	**$17,500**		**75,500**
Grand Total		**$27,290**	**$24,675**	**$23,100**	**$17,600**	**$10,325**	**$12,940**	**$23,100**	**$17,600**		**$156,630**
Tugrug		1,300₮									
Unit training cost		$546	$494	$2,310	$3,520	$207	$259	$2,310	$3,520		
		709,540₮	641,550₮	3,003,000₮	4,576,000₮	268,450₮	336,440₮	3,003,000₮	4,576,000₮		
Daily charge		$136	$165	$231	$704	$69	$65	$231	$704		
		177,385₮	213,850₮	300,300₮	915,200₮	89,483₮	84,110₮	300,300₮	915,200₮		

ANNEX C: FRAMEWORK PROPOSAL FOR THE DEVELOPMENT OF A QUALITY MANAGEMENT CENTER OF EXCELLENCE (QMCE)

1. Concept

The concept of Centers of Excellence is not new to global business. The CoE strategy has been utilized over the last few decades for a variety of objectives, primarily to create hubs for capacity building and knowledge sharing in industrial areas like pharmaceuticals, automobile, IT and telecoms. Momentum is now growing in specific functions like quality, innovation, customer service and technology.

In Quality Management its application is rapidly expanding, drawing on a knowledge base that leads companies toward managing their operations through customer focus, process management, process efficiency and effectiveness, and continual improvement.

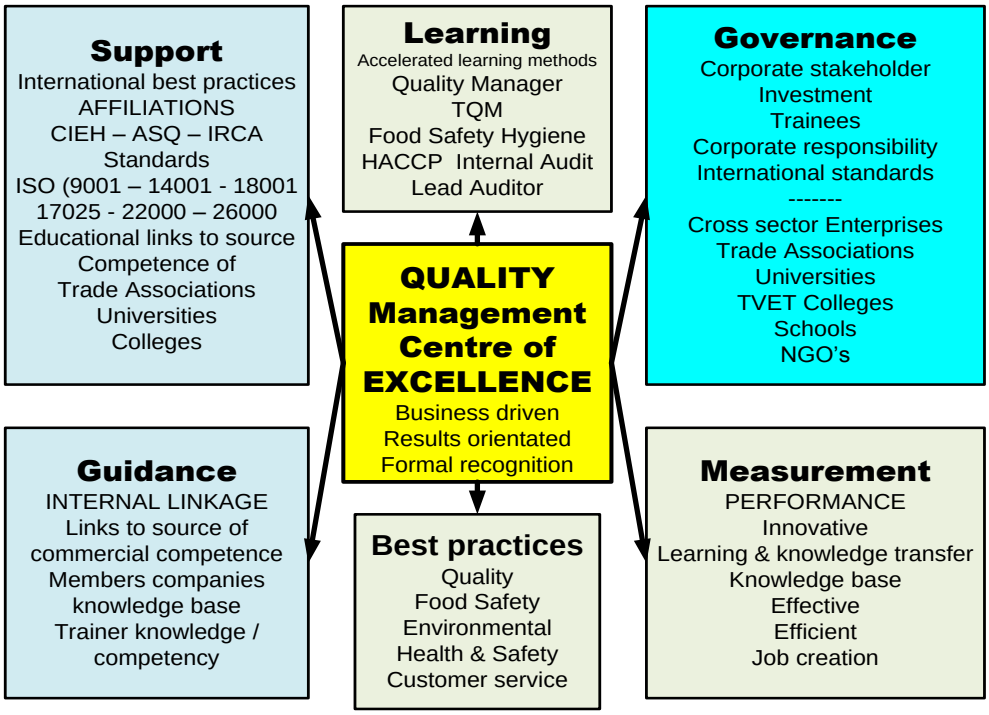
In Mongolia it also has potential to become a focal point for successful Quality minded industry leaders, as well as visiting guest lecturers and speakers to share ideas and inform on best practices that will improve the performance of organizations.

Mongolian Quality Management Center of Excellence definition;

> *A group of stakeholders (private sector companies, trade associations, universities and colleges) that promotes collaboration and use of best practices, specifically focusing on the development, delivery and implementation of international training standards in quality and food safety management.*

2. QMCE

a) Concept model



The QMCE led by a Board of Governors should agree and deliver the following primary needs:

- Support: CoE's should offer direct support to the business and association members by providing training services needed, and where possible providing subject matter experts.
- Guidance: Standards, methodologies, tools and knowledge repositories are typical approaches to filling this need.
- Best practices: Learning from and through the experience of others to achieve business objectives, keeping up to date with the ways that successful market leaders operate their businesses.
- Shared Learning: Training and certifications, skill assessments, team building.
- Measurement: CoEs should be able to demonstrate they are delivering the valued results that justified their creation through the use of output metrics.
- Governance: Allocating resources (money, people, etc.) across all possible sectors of the CoE to ensure organizations invest in the most valuable training areas.

b) Proposed status

The QMCE should be registered as a Limited Liability Company (LLC)

3. Charter stakeholders

The driving force for the long term success of a QMCE will require the selection of a peer group of dedicated, committed, successful industry leaders who will support the QMCE by using its services, and, by promoting to other enterprises, and trade associations the benefits of supporting the QMCE – **Charter Stakeholders.**

The CSH's must forge and develop ties with the educational leaders, encouraging partnerships between education centers and industry – inviting professors and lecturers to acquire working knowledge of modern businesses.

The CSH will need to enlist universities and college leaders to introduce foundation skills that will prepare learners for the challenges of future employment.

Lastly, CSH's must interface with public sector agencies, again by offering participation in "shared" skills and knowledge development.

4. QMCE members

Membership of the QMCE is directed toward industry and educational members, with affiliations being forged with international bodies in the fields of certification and professional membership.

A list of Charter interested Charter members, enterprise members, partners and affiliations is shown in Annex D, the main sections comprise of;

4.1 Full members

a. Charter Stakeholders – initial investors (Board Governor members)
b. Corporate Enterprise members (fee paying)
c. Business Trade Associations (invitation)
d. Universities and Technical Colleges (invitation)
e. Technical & professional Schools (invitation)

4.2 Associate members

a. Professional Associations
b. Business Council of Mongolia
c. NGO's - Mercy Corps, Asia foundation, TAM/BAS, IFC, ADB, GIZ.

4.3 International affiliations

a. ASQ (Certification & Professional)
b. CIEH (Certification)
c. CQI (Certification & Professional)
d. IEM (Certification & Professional)
e. IRCA (Certification)

4.4 International certification bodies

a. SGS
b. BSI
c. LQRA
d. Bureau Veritas
e. TUV

4.5 Mongolian state & professional institutes

a. Mongolian National Standards
b. GASI
c. MNCCI
d. MONEF

4.6 Government agencies

Given that maximum impact is required from the BPI project public sector agencies should be engaged in the Quality Assurance program in order to ensure any possible beneficial interaction between private and public sector.

Mindful that QMCE is to promote best practices, participants from the public sectors should be encouraged to participate to understand and learn about best practices.

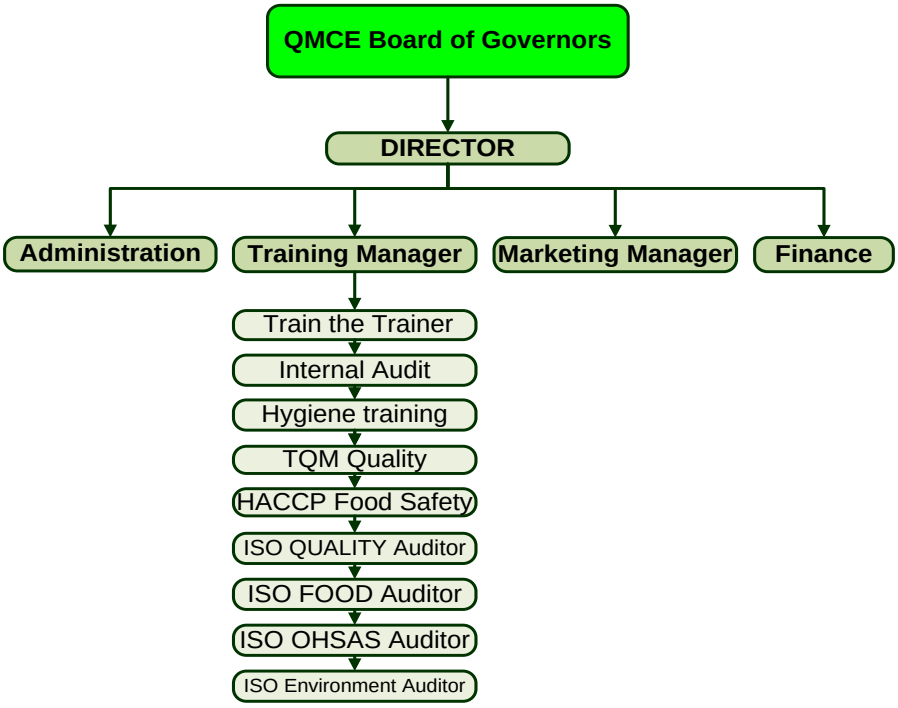
Currently many practices fail to follow international standards that have been developed - local agencies who represent International bodies with "best practices" fail to adhere or follow lower standards - "risk management inspection", "laboratory practices", "ISO standards", "Codex" Hygiene principles, "HACCP" food safety must have harmonized practice, by both private and public sectors.

The QMCE could offer Inspectors from government agencies, on a fee paying basis, opportunities to acquire the skills to control, guide, motivate, coach and facilitate best practices inside enterprises.

Likewise in the state professional schools, vocational colleges and universities all need to develop curricula competencies to levels that the industrial and commercial sectors are seeking from job placements.

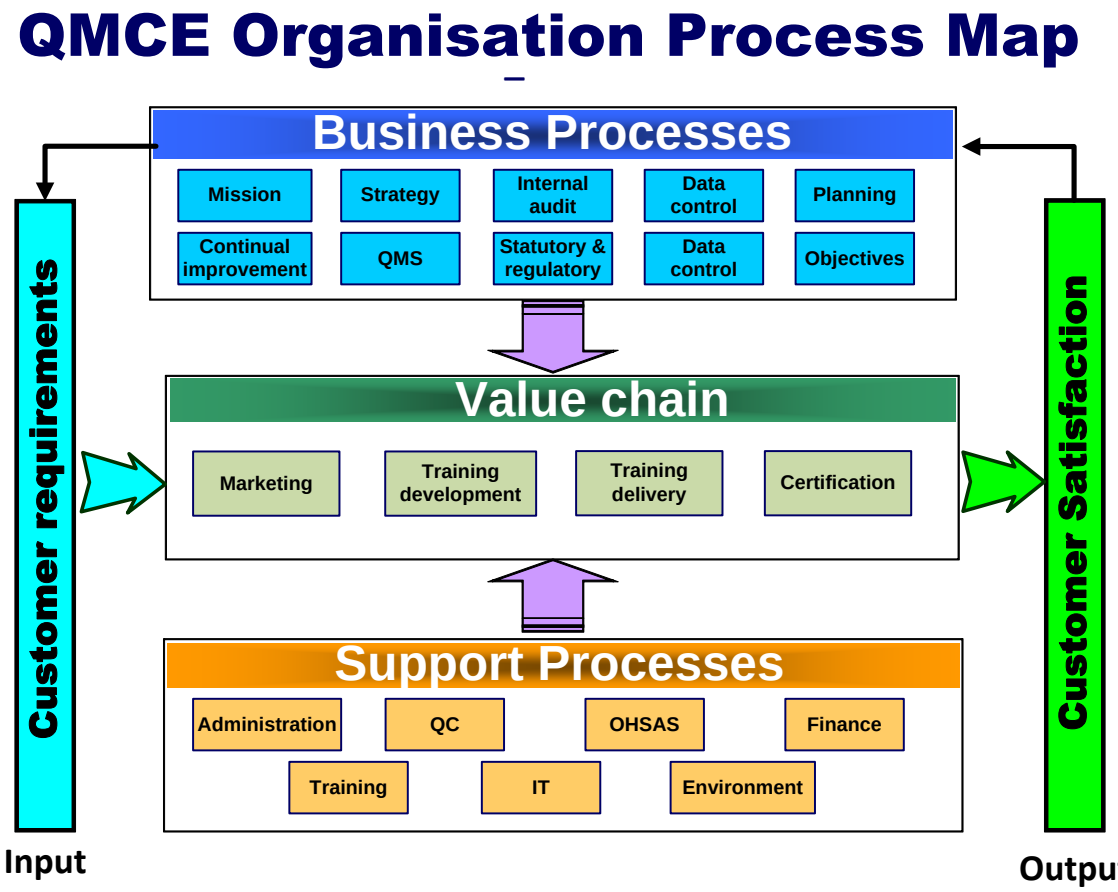
5. QMCE operating structure

A typical functional structure is offered below, but further discussions and facilitation should take place with the newly formed Board of Governors to finalize the structure.



Of more significant importance to the entity is the understanding and inclusion of its operational system methodology used - the Board of Governors would be expected, via the Charter, to shape the mission, policies and objectives using "process management" to determine and measure the objectives needed by focusing on achieving targeted key results areas that will meet or exceed customer requirements.

An example of the QMCE process approach management system would be:



6. Proposed QMCE Charter

a) It is proposed that the Center will acquire LLC or non-profit status, and will encompass the typical Memorandum & Articles of Association to include**:**

- Company name;
- The country of situation of the registered office;
- The objects;
- A statement that the liability of the members is limited;
- The amount of authorised share capital;
- An association and subscription clause which states that the subscribers (i.e. those signing) wish to be formed into a company and that they agree to take a specified number of shares in the company. The subscribers are the Charter founder members of the LLC company.

b) Articles of association

- Interpretation and limitation of liability
- Board of Governors
- Directors power and responsibilities
- Decision making by Directors
- Appointment of Directors
- Shares
- Dividends

- Profit
- General meetings
- Voting

c) **Vision for the Center of Excellence:**

To deliver "company-wide quality" by unlocking the potential of every employee.

d) Principles:
- Customer focus
- Leadership
- Involvement of people
- Process approach
- Systems management
- Continual improvement
- Factual decision making
- Supplier mutual beneficial relationships

e) Policies:
- Quality
- Health & Safety
- Environment
- Corporate Governance
- Corporate Social Responsibility

f) Key customers:

All organizations with desire to achieve quality in every process and activity.

g) Key partners:

Public and private service providers, academia, NGOs, business schools, skills / accreditation/ certification bodies.

h) Key issues going forward:
- Stakeholder agreement
- Consultation
- Governance design for founding partners
- Funding support
- Developing of Strategic plan
- Detailed implementation planning
- Project Implementation initiation and planning
- Resourcing
- Improvement measures
- Objectives
- Targets- the training results
- Resources needed to implement the plan
- Responsibilities - Job descriptions
- Budget – cost analysis of the plan
- Customer charter
- Internal / External Dependencies

i) A key requirement from the QMCE would be to create a sound foundation for establishing and building Quality and Food Safety Management training standards that enterprises

require. Such training courses should be based on best practices, use quality management principles, and be risk based, internally consistent and controlled, and internationally accepted and monitored.

Implementing and achieving the vision and mission, by following the principles to achieve the Center's objectives, will enable the QMCE to deliver the expectations of its customers.

j) QMCE objectives
- Develop the QMCE Charter Board Governors
- Train Mongolian Trainers
- Create a pool of Quality & Food Safety training modules
- To offer internationally recognized certified training courses related to Quality & Food Safety Management
- Provide International level certification
- Create a platform for sharing best practices
- Establish a TQM focus
- To connect industry with undergraduate curriculum a system for personal development and career planning.
- To become the national Center for quality management training.
- To develop employees and students who can demonstrate improved levels of professionalism
- Create employment opportunities for trainees.

k) Specific 1st year measureable targets
- Train the trainer - 10 TTT delegates
- Food safety hygiene – 100 delegates
- TQM – 100 delegates

- HACCP – 100 delegates
- Internal auditing – 100 delegates
- Provisional Quality Lead – 10 delegates
- Provisional Food Safety Lead Auditor – 10 delegates

7. Benefits of a QMCE

- Relevant Training course development based on industry assessed training needs
- Training that will raise / generate employment / career development opportunities to individual trainees.
- Motivated benefits to existing staff
- Potential availability of better trained new employees.
- Qualifications based on international standards
- qualification relevant to the job people are required to do by incorporating skills and knowledge
- Provision of qualifications that offer learners planned career progression through access to higher level training and other development opportunities

8. Supervising institution

The Mongolian QMCE would be supervised during its first two years by BPI, with an exit plan linked to QMCE sustainability.

9. Pilot training funding

In anticipation of the establishment of the QMCE, the members of the board would need to determine and agree to the charter agreement prior to formal registration.

Although BPI will be fully funding development of a pilot curriculum and materials, some primary costs of the training program should be supported by participants. Additionally, costs of longer-term Center(s) could be considered as basis for GDA arrangement between public and private sectors.

BPI should work with the Board of Governors to assess and determine the opportunities and benefits from GDA funding.

10. QMCE startup budget

It is proposed that Charter Stakeholders will contribute $3,000 in support of the establishment of the QMCE, this is illustrated in a draft QMCE startup budget - Annex C2; financial support would likely be needed from USAID during this start up phase.

QMCE Governors would be assisted to ensure their plan is cost effective and stabile from the start by linking training course availability to operational planning. The organization will draw income from supporting organizations in all training categories.

11. Media & communication

Proposed QMCE staff must be trained to ensure ability to communicate effectively with the public and private sector communities, and when in fact people require it – 24/7 electronically. Connectivity will be through the following:

a) Website
b) Newsletters
c) “Quality” training public service notices
d) Competitions

e) Telephone
f) SMS

QMCE could also promote quality through:

g) Quality award "company of the year"
h) "Quality" worker of the year
i) Quality management Forum
j) ASQ country group status
k) EFQM modeling
l) Malcolm Baldridge - annual measurement award competition
m) Scholarships
n) Apprenticeships
o) Customer service award

12. QMCE opportunities

a. Membership of professional institutes - introduction of International personal "professional" titles.
b. Establishment of international certification body office employing Mongolian Lead Auditors
c. CQI Diploma in Quality Management "masters" course – run through Mongolian universities – with GDA / EU assistance).
d. Continuing Professional Development requirement for trainees
e. Management Development Program – linked to scholarships
f. TVET colleges & Professional schools Quality Management courses
g. Regional Development - replication of QMCE initiative in other geographic
h. areas of Mongolia attractive
i. e-learning delivered into all Aimag centers.
j. Grant to support development and capacity building in Quality Management training.

13. QMCE sustainability

Through the application and implementation of best practices and process management approach, the QMCE should cope with the challenges of sustainability – but it will need to be based on "customer focus" culture, and is essential that course curricula content meets the expectations of clients.

The current training environment is lacking in providing value and measurable outputs – a QMCE correctly addressing these perimeters by helping businesses become both responsible and successful will build a sustainable client base.

14. Constraints

Other than financial, other immediate constraints will relate to the speed that Mongolian trainers can become conversant, proficient and meet affiliation organization's accepted training instructor criteria. Additional training will be required to develop / acquire the necessary qualifications, and capacity for delivering change management subjects to be offered.

15. Risks

National approval of a QMCE – Government Agency people must be on board through engagement and participation – it is felt it will be important for the private sector to ensure acceptable intervention from public and private agencies such as GASI, MNS, MCCI and

MONEF – their support could also indirectly assist enterprises to raise standards from attending QMCE courses.

ANNEX D: ENTERPRISES, ASSOCIATIONS, UNIVERSITIES, COLLEGES & SCHOOLS

Oyu Tolgoi
Tavan Tolgoi
APU LLC
AIDD
Aquaterra
Just Group
Wagner Asia
General Electric
Brilliant drilling
USS
Mongolian National Mining Association
Mongolian Employers' Federation
Mongolian Food Industry Association
Mongolian Meat Association
Chamber of Commerce & Industry
Mongolian Hotels Association
Mongolian Builders Association
Federation of Private Health Organizations/
Federation of Small & Medium Enterprises
Mongolian Tourism Association
Association of Mongolian Leather Goods Producers
Mongolian Wool and Cashmere association
Mongolian Management Association
Association of Dairy Production/
Mongolian cook federation
Business Council of Mongolia
Federation of Small and Medium Enterprises Development/
National Federation of Consumers Association
Central Union of Mongolian Trade and Consumers" Cooperatives
Mongolian Road Association
Mongolian Mining Rehabilitation Association
"Medicine' Association of pharmaceutical entities
Mongolian Standardization Association
Central Union of Mongolian Industrial Cooperatives
Union of Mongolian Production and Service Cooperatives
National Association of Mongolian Agricultural Cooperatives
Mongolian National Business Incubators Federation
Mongolian Federation of Human Resource Management
National Federation of Cooperatives
Mongolian Association of Promoting Vocational Training
National Consultants Association of Mongolia
School of Economic Studies of NUM / National University of Mongolia/
Computer Technology and Management School of UST
University of Science & Technology
Institute of Finance & Economy
Management Academy
Mongolian International University
School of Food Engineer & Biotechnology of UST
Food Technology College
School #23
Technics Professional Schools
Mineral Industry Safety Association

ANNEX E: DRAFT QMCE BUDGET

Year 1	Administration Expenditure			Charter member income		
ITEMS	Qty	cost	Total	Qty	cost	Total
Charter stakeholder investment				10	$3,000	**$30,000**
Office space - hire	12	$300	$3,600			
Course registration licences	5	$1,000	$5,000			
Equipment	12	$400	$4,800			
Laminator	1	$150	$150			
Computer	3	$1,500	$4,500			
Office consumables	12	$50	$600			
Advertising	12	$150	$1,800			
Brochures	1,000	$1	$1,000			
Course folder	500	$2	$1,000			
Training room hire	96	$300	$28,800			
Set up Legal fees	1	$500	$500			
Marketing	12	$400	$4,800			
Telecommunications	12	$100	$1,200			
Director	12	$1,000	$12,000			
Tutors	48	$50	$2,400			
Translation	200	$30	$6,000			
Sub total			**$78,150**			**$30,000**
Training course expenditure				**Training course income**		
Hygiene CIEH	1	$1,000	$1,000	100	**$150**	$15,000
Examinations	100	$15	$1,500			
Course materials	100	$40	$4,000			
Tuition	6	$50	$300			
HACCP/CIEH	1	$1,500	$1,500	100	**$200**	$20,000
Examinations	100	$15	$1,500			
Course materials	100	$50	$5,000			
Tuition	8	$50	$400			
Quality ASQ	1	$3,000	$3,000	100	**$200**	$20,000
Examinations	100	$300	$30,000			
Course materials	100	$50	$5,000			
Tuition	6	$50	$300			
Internal audit ASQ	1	$1,000	$1,000	100	**$150**	$15,000
Examinations	100	$300	$30,000			
Course materials	100	$40	$4,000			
Tuition	8	$50	$400			
5 day Quality LA IRCA	1	$18,000	$18,000	10	**$1,800**	$18,000
5 day Food safety LA IRCA	1	$18,000	$18,000	10	**$1,800**	$18,000
Sub total			**$124,900**			**$106,000**
Total			**$203,050**			**$136,000**
Surplus / deficit					**($67,050)**	